



Department of Pesticide Regulation



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Director

MEMORANDUM

Arnold Schwarzenegger
Governor

TO: Ryan Maughan
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State Water Resources Control Board
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FROM: Mark Rentz *Mark Rentz*
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DATE: September 4, 2007

SUBJECT: COMMENT LETTER-SEPTEMBER 13, 2007, IRRIGATED LANDS PROGRAM
JOINT WORKSHOP

9/13/07 Workshop
Irrigated Lands Program
Deadline: 9/4/07 Noon



Thank you for the opportunity to comment on the Central Valley Regional Water Quality Control Board's (Regional Board's) Irrigated Lands Program (ILP), which will be discussed at an upcoming State Water Resources Control Board (State Board) and Regional Board joint workshop on September 13, 2007. The public notice for the workshop highlighted issues related to the ILP that are of particular interest to the State and Regional Boards. The Department of Pesticide Regulation (DPR) shares interest in some of these issues, and our comments on them are offered below.

Coordination with Other Agencies

To date, the key ILP activities with outside stakeholders have been associated with administration and management of coalition groups and with assessment monitoring that is part of the monitoring and reporting requirements. Thus, the key relationships that have needed fostering have been among the ILP staff, coalition management, and their technical consultants. DPR has been an active member of the Regional Board's Technical Advisory Committee. We will continue to provide technical input regarding matters involving pesticide use as we move forward with the development and implementation of management plans in watersheds where water quality objectives have been exceeded.

DPR has demonstrated that it will use its authorities to improve water quality when environmental conditions suggest that pesticide-related water quality objectives are, or may be, exceeded. In fact, DPR's regulatory triggers have been the same as those used by the Regional Board. Resulting regulations and pesticide product reevaluations should play an important role in watershed management plans that may be required after repeat violations of water quality objectives. Specific cases are cited below.



Reevaluation of diazinon dormant sprays. Diazinon concentrations exceeded water quality criteria recommended by the Department of Fish and Game—the same criteria the Regional Board used later to set its water quality objectives for diazinon. DPR responded by placing diazinon dormant spray products into reevaluation. (Under reevaluation, pesticide registrants are required to submit to DPR additional information on registered products when it has been determined that registered use causes, or is likely to cause, a significant adverse impact.) The goal of the diazinon reevaluation is to assure conformity with the Department of Fish and Game criteria and Regional Board water quality objectives. In response, prior to the 2005–06 application season registrants amended use directions on labels of their diazinon dormant spray products in order to reduce transport from sites of application into surface waters. Users are subject to citations and fines if they do not follow these directions. Registrants have also supported studies to demonstrate the effectiveness of management practices. Monitoring results show that diazinon concentrations in high-use watersheds still exceed water quality objectives, so DPR required registrants to identify and implement additional measures that will further reduce diazinon runoff. Registrants are also required to submit monitoring data from receiving waters to demonstrate the effectiveness of the measures. Registrants' responses are pending.

Reevaluation of chlorpyrifos. The triggers and goals of the chlorpyrifos reevaluation are analogous to those of the diazinon dormant spray reevaluation: DPR responded to the same triggers that the Regional Board uses, and the goals are attainment and maintenance of water quality objectives. Chlorpyrifos registrants amended their product labels, requiring users to take additional actions to prevent offsite transport to surface waters. DPR asked registrants to demonstrate the effectiveness of the amendments in high-use watersheds, including the Salinas Valley. DPR and registrants are still discussing monitoring alternatives. If monitoring results show that upgraded labels are inadequate to achieve conformity with water quality objectives, DPR will expect registrants to implement additional measures and demonstrate their performance.

Reevaluation of pyrethroid insecticides. Research documented that pyrethroid insecticides were present in streambed sediments at concentrations that are toxic to sensitive aquatic organisms. Essentially, the Regional Board's narrative water quality objective for toxicity was violated in water bodies in both agricultural and urban settings. In one of the most extensive and comprehensive reevaluations yet initiated, DPR put into reevaluation 608 products, involving 123 pesticide registrants and 20 pyrethroid active ingredients. It was initiated in Fall 2006, and registrants are required to submit a variety of data, including additional toxicity data on sensitive aquatic organisms, the processes by which pyrethroids are transported from the site of application, and the effectiveness of management practices aimed at reducing or eliminating offsite movement. In an unprecedented action, DPR solicited consultation with Regional and State Board representatives during this reevaluation. The Boards designated staff contacts for the pyrethroid reevaluation, and it is DPR's hope that one of their functions will be to liaison with the ILP.

Dormant spray regulations. In 2006, DPR adopted new regulations that help reduce movement of dormant spray insecticides, including the pyrethroid esfenvalerate and organophosphates like diazinon and chlorpyrifos, into surface waters. The regulations require dormant spray users to apply management practices that reduce aerial drift, obtain written recommendations for use from licensed pest control advisors, and, significantly, use no-spray buffer zones near surface waters.

DPR believes that when these actions are fully implemented, some of the most significant impairments to water quality in the Central Valley will be resolved. If other pesticides cause, or are likely to cause, violations of water quality objectives, DPR is prepared to work with the Regional Board to craft an appropriate response, including the use of DPR's regulatory authorities if warranted.

Also related to interagency coordination, DPR, the State Board, and the County Agricultural Commissioners (CACs) in Butte and Glenn counties, are signatories to a Memorandum of Understanding for implementation of IPL in those counties. Through this agreement, CACs and their staff, who are local agents for enforcing DPR's pesticide regulatory programs, are an important link connecting the regulatory structures of ILP and DPR. This Memorandum of Understanding represents the first time a regional water board, the State Board, DPR, and CACs have entered into a formal agreement to coordinate implementation of a critical water quality program. DPR looks forward to working the State and Regional Board to foster similar agreements with other counties.

Additionally, one of DPR's commitments is to support development and implementation of reduced risk pest management practices. DPR's budget was recently augmented to reinvigorate its Pest Management Alliance Grant Program, which fosters implementation and adoption of effective pest management practices that reduce risks to human health and the environment. In its recent grant solicitation notice, DPR specifically encouraged grant proposals that promote implementation of pest management practices that reduce impacts on water quality. DPR expects that as growers become familiar with recently developed pest management strategies, use of pesticides that have historically been problems for water quality (i.e. organophosphates and pyrethroids) will decline.

Ground Water Quality

Another issue to be discussed at the upcoming workshop is ground water quality. Specifically, Regional Board staff will address the completeness and quality of data that may substantiate ground water impairments. They will also address long term programs for managing ground water quality. DPR has been engaged in similar issues for many years, and its efforts culminated recently with a set of regulations to protect ground water from pesticide contamination. DPR scientists presented information on this program at meetings of the State and Regional Boards

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over the last few years. They explained that since 1986, DPR's ground water protection efforts have been guided by specific mandates that require DPR to compile pesticide monitoring data from ground water, identify pesticides that have a reasonable potential to leach to ground water, and prohibit pesticides detected in ground water due to legal agricultural use unless future contamination could be controlled.

DPR's comprehensive ground water protection program relies on its compilation of results from pesticide monitoring of ground water, which now includes more than 1,600,000 records, representing 22,000 wells (over 4,900 of them sampled by DPR staff) throughout California. This compilation, also known as the well inventory, is freely available on DPR's Web site <<http://www.cdpr.ca.gov/docs/gwp>>. Using data in the well inventory database, DPR scientists developed the California Vulnerability Model, which identifies areas vulnerable to pesticide contamination by correlating soil types and hydrologic conditions in areas where pesticides were detected in ground water. Regulations now define these vulnerable areas (about 2.4 million acres statewide), as well as pesticides that are known to contaminate ground water following legal agricultural use (i.e. the herbicides atrazine, bentazon, bromacil, diuron, norflurazon, prometon, and simazine). The regulations also specify that if one chooses to use one of these known contaminants in vulnerable areas, specific management practices must be followed to prevent contamination.

In closing, DPR will continue to consult and collaborate with State and Regional Board staff to accomplish a common goal: making efficient use of Regional Board and DPR authorities to protect ground and surface water quality from the adverse affects of pesticides.

Thank you for your consideration. If you have any questions or comments, please direct them to Marshall Lee, Senior Environmental Scientist, at (916) 324-4269 or e-mail him at <mlee@cdpr.ca.gov>.

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